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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,227	03/25/2004	Hiroshi Kyusojin	450100-05089	6544

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FROMMER LAWRENCE & HAUG LLP
745 Fifth Avenue
New York, NY 10151

EXAMINER

HOLDER, ANNER N

ART UNIT	PAPER NUMBER
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2621

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/809,227	Applicant(s) KYUSOJIN, HIROSHI	
	Examiner ANNER HOLDER	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 3,6 and 8-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4-5, 7, and 15-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03/25/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 12/27/07 have been fully considered but they are not persuasive. As to Applicant's arguments, regarding the reference Son, Examiner disagrees. Regarding arguments on page 10, Son teaches the adjusting the number of frames thus effecting the number of bits per pixel. [Col. 6 lines 13-33] The quality of service (QoS) as taught in Son adjusts the level of decoding or the electric power mode, maintaining a balance between decoding and the power consumption. When the QoS is decreased power consumption is reduced. QoS is adjusted by dropping frame which affects the frame rate changing the bits per pixel. Regarding arguments on page 11, Son teaches time for displaying a predetermined number of frames, or the time needed to display that number of frames. [Fig. 2; Col. 2 lines 39-49]
2. Applicant's arguments, see page 9 ¶ 2, filed 12/27/07, with respect to the rejection(s) of claim(s) 7, 14, and 21 under 35 U.S.C. 101 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

Specification

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification is silent as to a computer readable medium.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2, 4-5, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Son et al. (Son) US 6,944,229 B2 in view of Shiiyama US 7,246,249 B2.

6. As to claim 1, Son teaches an image decoder for decoding encoded motion picture data composed of plural frames of image data and for displaying the decoded motion picture data; [Abstract] the image decoder comprising: an electric power source having consumable energy for supplying electric power to respective units of the image decoder; [Fig. 4 (300); Abstract; It would be obvious that the decoder unit is supplied with electric power] a decoding means for decoding the frames of image data of the encoded motion picture data; [Abstract; Fig. 4] at an adjustable image frame rate to provide an adjustable number of bits per pixel of the decoded motion picture; [Col. 6 lines 13-33] a displaying means for displaying each image data of the decoded motion picture data; [Fig. 2; Col. 2 Lines 44-49; It would have been obvious to one of ordinary skill in the art to display decoded images when images are played] and a controlling means for controlling the decoding means on the basis of anticipated energy needed for decoding and displaying the motion picture data and dynamically control the playing quality of the motion picture data. [Fig. 4; Col. 1 Lines 50-53; Col. 3 Lines 6-35; Col. 2 Lines 20-65, adjusting the decoding speed changes the quality of display; Col. 6 lines 13-33; Fig. 2; Col. 2 lines 39-49]

Son is silent as to means for determining the remaining energy of said source.

Shiiyama teaches means for determining the remaining energy of said source. [Abstract; Figs. 1-6; Col. 1 lines 27-47; Col. 3 lines 30-35, 51-60; Col. 4 lines 55-61; Col. 5 lines 34-43]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the remaining power detection teachings of Shiiyama with the device of son allowing efficient power consumption.

7. As to claim 2, Son (modified by Shiiyama) teaches the image decoder decoding means includes a CPU operable at an adjustable frequency; and said means for determining the remaining energy comprises a load monitoring means for monitoring the computational load of the decoding means, and adjusts the CPU frequency of the decoding means in accordance with the computational load corresponding to the playing quality. [Son - Fig. 4 (200); Col. 4 Lines 16-19, 22-25, 31-46; Col. 6 lines 13-33; Fig. 2; Col. 2 lines 39-49; Shiiyama - Abstract; Figs. 1-6; Col. 1 lines 27-47; Col. 3 lines 30-35, 51-60; Col. 4 lines 55-61; Col. 5 lines 34-43]

8. As to claim 4, see the discussion of claim 1 above.

9. As to claim 5, see the discussion of claim 2 above.

10. As to claim 7, see the discussion of claim 1 above.

11. Claims 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Son et al. (Son) US 6,944,229 B2.

12. As to claim 15, Son teaches an image decoder for decoding encoded motion picture data composed of plural frames of image data and for displaying the decoded motion picture data; [Abstract; Col. 1 Lines 7-10] the image decoder comprising: a decoding means for decoding the frames of the encoded motion picture data; [Abstract; Fig. 4] a displaying means for displaying the frames of the decoded motion picture data; [Fig. 2; Col. 2 Lines 44-49; It would have been obvious to one of ordinary skill in the art to display decoded images when images are played] and a controlling means for controlling the decoding means to dynamically control the playing

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quality of the motion picture data, [Fig. 4; Col. 1 Lines 50-53; Col. 3 Lines 6-35; Col. 2 Lines 20-65, adjusting the decoding speed changes the quality of display] on the basis of a unit time during which a predetermined number of frames are to be displayed, a time needed to display said predetermined number of frames, or an anticipated time needed to display said predetermined number of frames. [Col. 1 Line 66 – Col. 2 Line 18; Col. 2 Line 29-38; Abstract; Col. 3 Lines 6-10; Col. 5 Lines 10-12, 31-44; Fig. 2; Col. 2 lines 39-49]

13. As to claim 16, Son teaches the controlling means anticipates the time needed to display the predetermined number of frames on the basis of the number of frames that can be displayed during the unit time. [Col. 1 Line 66 – Col. 2 Line 18; Col. 2 Line 29-38; Abstract; Col. 3 Lines 6-10; Col. 5 Lines 10-12, 31-44; Fig. 2; Col. 2 lines 39-49]

14. As to claim 17, Son teaches the playing quality is determined by the number of frames to be displayed during the unit time or the number of bits per pixel of the decoded image data. [Col. 1 Line 66 – Col. 2 Line 18; Col. 2 Line 29-38; Abstract; Col. 3 Lines 6-10; Col. 5 Lines 10-12, 31-44; Fig. 2; Col. 2 lines 39-49]

15. As to claim 18, see the discussion of claim 15 above.

16. As to claim 19, see the discussion of claim 16 above.

17. As to claim 20, Son teaches the playing quality is determined by the number of frames to be displayed during the unit time or the number of bits per pixel of the decoded image data. [Col. 1 Line 66 – Col. 2 Line 15; Col. 2 Line 29-38; Col. 4 Lines 55-58; Col. 1 Line 66 – Col. 2 Line 18; Col. 2 Line 29-38; Abstract; Col. 3 Lines 6-10; Col. 5 Lines 10-12, 31-44; Fig. 2; Col. 2 lines 39-49]

18. As to claim 21, see the discussion of claim 15 above.

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19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Love et al. (US 5,745,520) teaches dynamic adjustment of power based on frame quality; Larhiri et al., "Communication Architecture Based Power Management for Battery Efficient system Design, DAC 2002 teaches dynamically changing CPU voltage and frequency; AbouGhazaleh et al., "Toward the Placement of Power Management Points in Real Time Applications", Compilers and operating systems for low power, Pg. 37-52, 2003 teaches dynamically changing CPU voltage and frequency; Watts et al., "Dynamic Management in Embedded Systems", IEE Electronics Systems and Software, Pg. 18-22, October/November 2003 teaches dynamically changing CPU voltage and frequency.

Conclusion

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANNER HOLDER whose telephone number is (571)270-1549. The examiner can normally be reached on M-Th, M-F 8 am - 3 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ANH 03/18/08

/Tung Vo/

Primary Examiner, Art Unit 2621